

Harbeth User Guide

Here at Harbeth UK we are dedicated to reproducing the musicality and warmth of natural sound. With careful use, our loudspeakers will give you very many years of listening pleasure, and time will prove your new loudspeakers to be the ultimate audio investment. I warmly welcome you as a customer and encourage you to join the Harbeth User Group (www.harbeth.co.uk) and share your experiences with other Harbeth owners who, like you, are serious about high fidelity natural sound.

Alan A. Shaw, Managing Director and Designer, Harbeth UK.

IMPORTANT - LIFTING YOUR NEW HARBETHS FROM THEIR CARTONS

Before you attempt to lift the speakers from their cartons please take note of the staples running top to bottom along one long edge of the carton. Open the carton's top flaps, remove the packing cap and take care to avoid contact between the staples and speaker cabinet. Retain the packing in a dry place.

INTRODUCTION

Harbeth loudspeakers are precision instruments. The cabinets are crafted from a complex interplay of natural and man made materials, every small detail of which exists for a specific acoustic purpose. The incredible resolving ability of the fresh, clean Harbeth sound is the result of high-tech science combined with traditional craftsmanship. After exercising your new Harbeths for just a few hours they will be fully ready for a lifetime of unbeatable performance.

This manual makes a few suggestions for how to extract the best possible performance from your audio system. Your own experience must guide you, and what really matters is what sounds best to you in your room, with your music, your taste and your equipment. Don't hesitate to turn to the Harbeth User Group for help and advice.

Musical appreciation is an ongoing relationship among performers, recording engineers, equipment designers, you and your audio dealer. Your dealer is ready to help you to get the best from your hi-fi and has the time and the skills to experiment. Keep an open mind as to new musical avenues, equipment and accessories. Above all, *trust your own ears!*

STANDS

Harbeth speakers are at their best when used in 'free-field' conditions. This implies that the speakers are raised off the floor and as far as possible away from adjacent surfaces, on stands made from a rigid and non-resonant material, such as wood, filled steel or polymers tubes. If you have children or animals at home be sure to put **safety first** as our speakers are heavy. The top-plate of the stands must be adequately large and the stands themselves solid and stable

BASIC INSTRUCTIONS, HINTS AND TIPS FOR GETTING THE BEST FROM YOUR HARBETH LOUDSPEAKERS

V6 Oct 2012



to prevent the speakers from toppling over and causing injury or damage.

The cabinet may be attached to the stand's top-plate with a small pea-sized ball of "Blu-Tack", cork or rubber cushioning dots, cones or spikes. Note: only use the absolute *minimum* amount of Blu-Tack as it will permanently bond to the veneer and cannot be removed. Speaker stands are usually fitted with sharp spiked feet that further improve stability.

Ideally, the stands should place the tweeter about level with your ear when seated at your usual listening position — the so-called 'reference axis' — where the frequency response is optimised. Tall stands lift the speaker farther away from the floor which adjusts the bass quality but there is always a compromise involving the aesthetics of tall stands, the technically ideal listening height and stand stability.

Although the reference listening axis is directly facing the front baffle, some users prefer both speakers toed-in towards the listening seat by a few degrees. Adjusting the toe-in alters the balance especially between the mid and high frequencies in your room according to your preference.

AMPLIFIERS, CABLES AND WIRING-UP

Harbeths are designed to present an 'easy' electrical load to the amplifier and will work well with valve (tube), solid-state and digital amplifiers. Playing loudly in a large acoustically dry, well furnished room will demand a powerful amplifier. Conversely in a smaller setting listening closer to the speakers, much less power is needed. As an approximation, for normal domestic listening an amplifier of about 45W into 8 ohm per channel rating is a good starting point and 100W into 8 ohm per channel would provide a reserve of power for the louder musical passages if used with care. Be aware that small amplifiers with limited power output may 'clip' when driven hard and as clipping can damage loudspeaker drive units it is not covered by our Warranty. The amplifier's performance can change over time, and it should ideally be tested and serviced periodically.

The amplifier's volume control works much like a zoom lens and brings the performers closer to you as replay loudness increases. Every sound recording has an optimum loudness; not too close and not too far away so that the scale, perspective, detail and tonal colours are in their correct proportion. Listening at home at a responsible loudness of around 85dB is considered a long-term sensible hearing exposure level by health experts and may be tolerable by close neighbours. Harbeth speakers are uniquely optimised to sound full bodied and natural at safe listening levels.

There are many differing views about interconnect and speaker cables. Your dealer can provide invaluable advice so we will leave you to explore that and concentrate here on the basics of hooking-up your loudspeakers. Conventional QED-like 79-strand cable (or similar) is all you need to get going. Thin, high resistance cables or exotic cables with a strange construction may exhibit high capacitance and/or inductance characteristics and *definitely should be avoided* as they will produce unpredictable results and could damage your amplifier. Where practicable use the same, shortest- possible cable lengths between amplifier and speakers routed to avoid the possibility of tripping and pulling the speakers off their stands. Your dealer will be pleased to make-up and supply cables at just the right length, terminated with the most suitable connectors for your equipment and can give you plenty of advice on cable selection.

The rear terminal panel of your Harbeth speakers carries red and black coded connectors. Some models feature four connectors (permitting a *bi-wiring* connection arrangement) so the upper pairs are connected internally to the tweeter via its crossover network and the lower pair to the woofer through its circuitry. Most models have only one pair of red/black binding posts. The standard *single-wiring* connection method is the simplest, safest and quickest way of connecting your amplifier, as shown in Setup A.

Reportedly, the so-called 4mm banana plugs commonly used for connecting speakers to amplifiers can be confused with overseas two-pin mains plugs. Your dealer will be able to advise you whether or not 4mm speaker plugs are acceptable in your country. As an alternative you can use spade connectors or with care, bare wire ends if the surplus wire is trimmed off. The signal wire connectors must not touch at any time or the amplifier may be seriously damaged.

It is extremely important to connect your Harbeths with the proper phase relationship between the left and right channels and in bi-wiring/bi-amping configurations additionally between the woofer and tweeter connections in each speaker. Wiring your speakers is much simpler if you select a clearly colour-coded cable where the 'hot' (+) or 'cold' (-) conductors are unmistakably identified by colour, rib or printed stripe running along the sheath. Some cables only have a faint coloured identifier printed infrequently, so please take care. Incorrect connections will make natural sound reproduction impossible and could damage your amplifier. Always recheck the wiring before powering up the system after making any changes and look out for fine strands of wire that can stray between terminals and cause a short circuit.

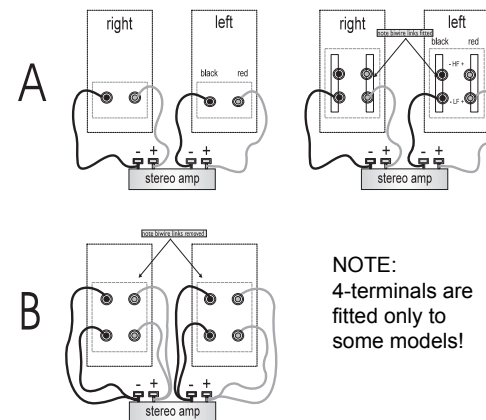
Never allow a (+) conductor to touch (short) against a (-) conductor even for a second as some amplifiers cannot tolerate output short-circuits no matter how briefly.

Safety first!

Turn off your amplifier BEFORE making any changes to the wiring of your audio system or speakers.

Setup A - Single-wiring (preferred standard method)

Where four-terminals are supplied, the bi-wire links must be fitted to bridge the speaker's red-to-red and black-to-black terminals or where only two terminals are fitted, connect to your amplifier like this



Setup B - Bi-wiring for speakers with four rear terminals

First, *remove* the bi-wire links and connect two pairs of cables to each speaker. From the *amplifier's* red (+) terminal run two conductors to both of the speaker's red terminals. From the *amplifier's* black (-) terminal connect to both of the speaker's black terminals. You must identify with certainty the polarity of all the conductors at both ends of the cable to avoid confusion. Incorrect wiring will result in a short-circuit with potentially serious consequences for the amplifier.

Bi-amping (not shown) is the most complex arrangement. It is *essential* to remove all four bi-wire links before setting-up for bi-amping which mandates two absolutely identical and calibrated stereo amplifiers wired so that one complete stereo amplifier drives each loudspeaker i.e. the amplifier left channel drives the woofer and the amplifier right channel drives the tweeter. The wiring is complex and the performance of the whole system entirely depends on amplifier characteristics and set-up. Even the smallest variations in gain between the channels of a normal hi-fi amplifier may be enough to alter the relative balance between the bass/mid and high frequencies.

Bi-amping your speakers is specifically excluded from Harbeth's Warranty as it requires test equipment to set-up properly and strict attention to wiring. Your dealer can provide detailed advice on bi-amping or bi-wiring.

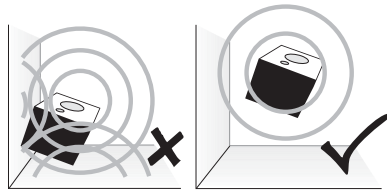
When you have completed your wiring, be sure to route the speaker cables carefully to prevent anyone tripping over them.

Continued over:.....

SPEAKERS IN THE LISTENING ROOM

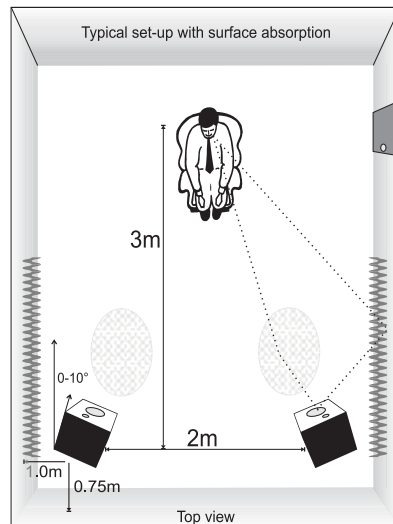
A sonic compromise has to be reached between positioning the speakers unobtrusively near walls or positioned farther out in the listening area. When a loudspeaker is close to a boundary wall (floor, ceiling or corner) the speaker becomes

Top view



Right speaker near corner

'acoustically coupled' to the surface, just as if it is actually attached to it. The speaker then no longer operates in 'free space' with a predictable frequency response but with an elevated low/mid frequency output that, while not necessarily unpleasant, adds a lushness to the lower registers. Well-stocked bookcases behind or beside speakers can greatly improve the low frequency naturalness as can an asymmetrical placement of the speakers. Below is an example of a typical set-up.



Some listeners say that the most natural sound-stage is achieved when the speakers are slightly closer to each other than they are away from the listener (above) — please experiment in your room to see what sounds best.

The ear does not like standing-waves or echoes which you can identify by moving around your room and loudly clapping your hands. Parallel surfaces such as opposite walls, floor and ceiling encourage and sustain problem frequencies and

flexible plasterboard walls and wooden floors over cavities such as a basement or garage may resonate and cause boom. Curtains, thick carpets, rugs and bookcases strategically positioned to minimise reflections in the room (see picture) can make a dramatic improvement in fidelity. Pleated curtains on tracks across windows or side walls are an excellent way of temporarily adjusting room acoustics.

Optimising your speakers in your room needs experimentation but the general rule is the more absorptive the room, the less the room influences the sound. Fortunately the ear is forgiving of all but the most severe room acoustic problems.

Tone controls and modern digital signal processing room-correction systems can, when used carefully, offer a solution especially in the lower frequencies. In the middle and upper frequencies conventional soft-fabric treatments are an easy solution to damping a 'live' room.

RECORDINGS - WHAT TO LISTEN FOR

Prepare yourself to hear unexpected details in even your most cherished recordings that you previously did not realise were there. A first class recording conjures up a vivid 3D holographic performance — a curtain of sound — between and beyond the speakers. Listen out for the way that the crystalline inner clarity of the Harbeth RADIAL™ cones transport you back in time and space to the recording venue. Be aware that most contemporary commercial recordings have been sonically processed to enhance their marketability and that this may be exposed by the greater resolution of your Harbeth speakers. Certainly many of the most natural recordings and performances were produced years ago using simple equipment. Please share your choice of showcase recordings with us on the Harbeth User Group.

CARE FOR YOUR HARBETHS

To maintain your speakers occasionally wipe over the wood with a slightly damp cloth rinsed in a dilute detergent suitable for wood veneer. Do not use waxy polishes. Please avoid direct sunlight, radiators, draughts, smoke, ozone and other chemicals on or near the cabinets. The special protective Harbeth SuperGrilles™ should be fitted during listening; they can be cleaned with a soft, dry clean paintbrush. Do not press or touch the drive units under or through the grille. If necessary the bass unit can be cleaned with a photographer's air-brush, *never* a cloth. Do not clean the tweeter.

REGISTERING YOUR HARBETHS

Thanks to rigorous quality control in design and during production, Harbeth speakers will give a long trouble-free service life if operated at a normal responsible volume level. The ex-factory Warranty can be extended (subject to conditions) by Registering your speakers on the Harbeth web site. Finally, thank you: we wish you many years of great listening.

Harbeth.

Harbeth Audio Ltd.

3-4 Enterprise Park, Lindfield, Haywards Heath,
West Sussex, RH16 2LH, England.

Tel: 01444 484371 www.harbeth.co.uk www.harbeth.co.uk/usergroup

